IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants:	B. Alexander et al.	Attorney Docket No.: VIGL118276
Application No.:	10/007,136	Art Unit: 2621 / Confirmation No: 1933
Filed:	December 3, 2001	Examiner: T.T. Vo
Title:	SYSTEM AND METHOD FOR PROCESSING VIDEO DATA UTILIZING MOTION DETECTION AND SUBDIVIDED VIDEO FIELDS	

RESPONSE AFTER NON-FINAL REJECTION

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June 20, 2008

TO THE COMMISSIONER FOR PATENTS:

Applicants respectfully request reconsideration of the above-identified patent application. Claims 1-56 are pending in the present application. In the January 31, 2008, Office Action (herein "Office Action"), Claims 1, 2, 4-22, 24-39, and 41-56 were rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 7,023,469, to Olson et al. (hereinafter "Olson"). Moreover, the Office Action rejected Claims 3, 23, and 40 under 35 U.S.C. § 103(a) as being obvious in view of Olson. Applicants respectfully disagree and submit that Claims 1-56 are not anticipated by, and are non-obvious in view of, Olson because Olson fails to teach or suggest certain elements of both the independent and dependent claims, which are discussed in detail later in this response. Prior to discussing more detailed reasons why applicants believe that all of the claims of the present application are allowable over the cited reference, a brief description of the present invention and the cited reference is presented.

Summary of the Present Invention

A system and method for processing digital images for display on a graphical user interface is provided. A processing server obtains a first frame of image data corresponding to an output from a digital capture device. The processing server displays the first frame of data

within a display area on the graphical user interface. In response, the processing server obtains a designation of at least one processing zone from the user interface device. Each processing zone corresponds to a specific geometric shape and includes processing rule data. The processing server then obtains a second frame of image data corresponding to the output from the digital capture device. The processing server determines whether variations or changes occurred between the first and second frames within the processing zone by evaluating differential data corresponding to an adjustable parameter. If the server determines that significant variations or changes occurred, the image data represented in the processing zone is stored to a mass storage. In this regard, image data that is in the same or different processing zone may be excluded from being stored to the mass storage if significant variations or changes do not occur. As a result, aspects of the present invention facilitate a system in which image data in a stream of video images will only be stored to the mass storage if motion is detected. Moreover, when motion is detected within a stream of video images, only image data within a subdivided area of the image data may be stored to the mass storage.

Olson

Olson is purportedly directed to a system for automatically capturing image data using a camera and an image processing device. The image processing device is configured to save a reference image from the camera and compare subsequent images to the reference image. In this regard, the image processing device detects and tracks "change regions" between the reference image and subsequent images. A "change region" is an area between successive images in which pixel variations exist. For each change region, the image processing section saves the path of movement of the change region, and a selected image of the change region. In this regard, processing may be performed to capture images of a detected person so that images capture the detected person facing and close to the video camera.

(I) The Claims Distinguished: 35 U.S.C. § 102(e)

A. Claims 1, 21, and 38

For purposes of this discussion, independent Claims 1, 21, and 38 will be discussed together because the limitations discussed herein are similar for each claim.

In this regard, Claim 1 recites the following:

> 1. A method for processing image data, the method comprising:
>
> obtaining at least one processing zone for processing digital data obtained from a digital capture device, wherein the at least one processing zone corresponds to a specific geometry that is a subdivided area represented in each frame of a stream of video frames;
>
> obtaining a first frame of image data corresponding to the digital capture device that includes the at least one processing zone as a subdivided area;
>
> obtaining a second frame of image data corresponding to the digital capture device that includes the same at least one processing zone;
>
> determining whether there is significant change in the image data between the first and second frames within the same at least one processing zone, wherein the determination of significant change in the image data is made by evaluating differential data corresponding to an adjustable parameter in the image data that is represented within a geometry of the same at least one processing zone; and
>
> processing an event only if a significant change in the image data is determined between the first and second frames within the same at least one processing zone, wherein processing the event includes storing the image data in the same at least one processing zone to a mass storage only if significant change in the image data is determined and excluding image data in the same or different at least one processing zone from being stored to the mass storage if no significant change in the image data is determined.

Similarly, Claim 21 recites the following:

> 21. A system for providing security monitoring, the system comprising:
>
> one or more monitoring locations including a monitoring device operable to generate a digital image;
>
> a central processing server operable to obtain the digital image and generate a user interface;

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at least one monitoring computing device operable to display the user interface and to obtain one or more processing zones corresponding to the digital image data, wherein the central processing server processes the digital image data to determine whether significant change exists in at least one processing zone between successive frames of the digital image data, and only if a significant change is identified, the central processing server stores the digital image data in the at least one processing zone to a mass storage and excludes the digital image data in the same or different at least one processing zone from being stored to the mass storage if no significant change is identified.

Similarly, Claim 38 recites the following:

38. In a computer system having a graphic user interface including a display and a user interface device, a method for processing image data, the method comprising:

obtaining a first frame of image data corresponding to an output from a digital capture device;

displaying the first frame of data within a display area in the graphical user interface;

obtaining a designation of at least one processing zone from the user interface device, wherein the processing zone corresponds to a specific geometric shape within the display area that represents a subdivided area in a stream of video frames and includes processing rule data;

displaying the processing zone within the display area of the graphical user interface;

obtaining a second frame of image data corresponding to the output from the digital capture device that includes a specific geometric shape within the display area representing a subdivided area in a stream of video frames;

determining whether there is significant change between the first and second frames within the at least one processing zone, wherein the determination of significant change is made by evaluating differential data corresponding to an adjustable parameter; and

processing an event only if a significant change is determined between the first and second frames within the at least one processing zone, wherein processing the event includes storing the image data in the at least one processing zone to a mass storage only if the significant change is determined and excluding image data in the same or different at least one processing zone from being stored to the mass storage if no significant change is determined.

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Each of the independent Claims 1, 21, and 38 recites determining whether a significant change exists in a processing zone or subdivided area that is included in a plurality of frames of video data and processing an event only if a significant change has been identified. In this regard, processing the event includes storing the image data that appears in at least one processing zone to a mass storage only if the significant change has been identified and excluding image data in the same or different at least one processing zone from being stored to the mass storage if no significant change has been determined. Simply stated, Olson does not teach a system for storing image data that appears in a processing zone to a mass storage only if a significant change is determined and excluding image data in the same or different processing zone from being stored to the mass storage if no significant change has been determined.

The Office Action asserts that Olson teaches processing two images for comparison. Based on the comparison, a detected object within the images is saved. The Office Action contends that this suggests storing image data to a storage media only if a significant change is determined between the two images, as recited in the present claims. The Office Action further asserts that Olson does not save each of the numerous images of a person (person 86) which are obtained while the person walks down the hallway, and contends that this aspect of Olson suggests that image data is excluded when there is no significant change between the two images. Applicants respectfully disagree.

Olson specifically teaches, at Col. 6, lines 42-48, that Cartesian coordinate pairs for each detected object are saved for each video image in which the detected object is present. Olson goes on to further specifically teach that the saved set of Cartesian coordinate pairs for a detected object, for all images in which the detected object is present, serves as a trace of the movement of the detected object within the observed area. In other words, Cartesian coordinate pairs for each detected object (e.g., person 86), in all images (e.g., as illustrated in Figure 6 of Olson) that

include the detected object, are saved. Since there will be more than one image like the one illustrated in Figure 6 to trace the movement of the person 86 while the person 86 walks down the hallway 71, Olson saves the Cartesian coordinate pairs for the person 86 in each of the images tracing the movement of the person 86, even though there is no change in the images that trace the movement of the person 86 while the person 86 walks down the hallway 71. In other words, Olson specifically teaches a system for storing image data (Cartesian coordinate pairs), that appears in a processing zone (hallway 71), to a mass storage in order to trace the movement of the image (person 86) irrespective of the presence or absence of significant change within the processing zone. These aspects of Olson actually teach away from Claims 1, 21, and 38, which recite a system and method comprising processing an event only if a significant change is determined between the first and second frames within the at least one processing zone, wherein processing the event includes storing the image data in the at least one processing zone to a mass storage only if the significant change is determined and excluding image data in the same or different at least one processing zone from being stored to the mass storage if no significant change is determined.

As explained above, Olson fails to teach or suggest a system and method for processing image data comprising processing an event only if a significant change in the image data is determined between the first and second frames within the same at least one processing zone, wherein processing the event includes storing the image data in at least one processing zone to a mass storage only if significant change in the image data is determined, and excluding image data in the same or different at least one processing zone from being stored to the mass storage if no significant change in the image data is determined. Accordingly, applicants respectfully request withdrawal of the pending rejection with regard to Claims 1, 21, and 38, and the allowance of Claims 1, 21, and 38.

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Claims 2, 4-20, 22, 24-37, 39, and 41-56

Claims 2 and 4-20 depend on independent Claim 1, Claims 22 and 24-39 depend on independent Claim 21, and Claims 39 and 41-56 depend on independent Claim 38. As discussed above, Olson fails to teach each and every element of independent Claims 1, 21, and 38. Accordingly, for the above-mentioned reasons, Claims 2, 4-20, 22, 24-37, 29, and 41-56 are also not anticipated by Olson. Accordingly, applicants respectfully request withdrawal of the pending rejection with regard to Claims 2, 4-20, 22, 24-37, 29, and 41-56, and the allowance of Claims 2, 4-20, 22, 24-37, 29, and 41-56.

(II) The Claims Distinguished: 35 U.S.C. § 103(a)

As noted above, Claims 3, 23, and 40 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Olson. Applicants respectfully disagree. In this regard, Claim 3 depends directly or indirectly on independent Claim 1, Claim 23 depends directly or indirectly on independent Claim 21, and Claim 40 depends directly or indirectly on independent Claim 38. As discussed above, since Olson fails to teach or suggest each and every element of independent Claims 1, 21, and 38, Claims 3, 23, and 40 are allowable over Olson. Accordingly, applicants respectfully request withdrawal of the pending rejection with regard to Claims 3, 23, and 40.

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CONCLUSION

In view of the foregoing amendments and remarks, applicants respectfully submit that the above-identified patent application is in condition for allowance. Reconsideration of the present application and allowance of the claims at an early date are solicited. If the Examiner has any questions or comments concerning this matter, the Examiner is invited to contact applicants' undersigned attorney at the number provided below.

Respectfully submitted,

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